From: Ilya Sandler
To: Microsoft ATR
Date: 1/26/02 1:21am
Subject: Microsoft Settlement

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Dear Sirs:

I am respectfully submitting the comments below in hope that the settlement conditions would be strengthened to more efficiently prevent Microsoft illegal behavior and encourage competition in software industry.

I am a professional software engineer with a PhD degree in Physics.
I have worked with both Microsoft and non Microsoft products.
I am deeply concerned about destructive effect
of Microsoft on competition in software industry. (The company I am working
for is not in software industry and is not competing with Microsoft)

Sincerely yours,

Ilya Sandler isandler@friends-partners.org

Citations from the judgment are in >>>citation<<< format When a part of citation is unimportant for commenting purposes, it is replaced with "..."

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III.A. Microsoft shall not retaliate against an OEM ... because it is known to Microsoft that the OEM is or is contemplating:

- 1.developing, distributing, promoting, using, selling, or licensing any software that competes with Microsoft Platform Software or any product or service that distributes or promotes any Non-Microsoft Middleware;
- 2.shipping a Personal Computer that (a) includes both a Windows
 Operating System Product and a non-Microsoft Operating System, or
 (b) will boot with more than one Operating System;
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The requirement should be expanded to cover any Microsoft business partners (not just OEMs). OEMs are not the only channel through which Microsoft can illegally protect and expand its monopoly. An example of non OEM partner would be America Online and Apple: by threatening to withhold some critical services from these companies Microsoft forced them to replace Netscape Navigator with Internet Explorer as a default browser.

In "item 1" the phrase "any Non Microsoft Middleware" should be replaced with "Any Non Microsoft Software" and "competes with Microsoft platform software" should be replaced with "competes with any Microsoft software".

Microsoft should not be allowed to use its monopoly power to interfere with Non-middleware non-platform competition.

Item 2 should be expanded to include
(c) will have no Microsoft operating system installed
(either will have an alternative operating system or have no operating system at all, many computer users would prefer to do installation themselves)
Obviously, without this addition Microsoft is free to retaliate against anyone who ships a Linux only PC (or a PC without Operating System).

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III B. Microsoft's provision of Windows Operating System Products to Covered OEMs shall be pursuant to uniform license agreements with uniform terms and conditions

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There are two kinds of monopolistic behavior which this measure could prevent

- (a) using existing monopoly in one market to gain a monopoly in another market
- (b) use its monopolistic position to maintain artificially high retail prices (in particular, forcing unnecessary upgrades)

(a typical scenario for (b) works like this: a few key partners are given the latest MSOffice product for a very low price, this latest product uses file formats different from formats of the previous product. So soon there are documents flying around in this latest format and the only way to read them is to upgrade existing MSOffice with upgrade costs in hundred of dollars per seat) Behavior (b) is possible only when there is no competition. In competitive market such a behavior is impossible (e.g. repair/service/most of spare part business of Toyota cars is not controlled by Toyota: Toyota has almost no pricing power over "post-sale" service market)

suggested modification 1:

The proposed measure prevents behavior (a) but only partially. Operating Systems are not the only product where Microsoft can use threats of existing license termination as a way to push another product. For example, very few companies may afford to lose MsOffice licensing. Thus Microsoft should be required to uniformly license any product where Microsoft holds a dominant market position (the list of such software should be reviewed regularly and at present it definitely should include all of MS Office components (Word, Access, Excel, PowerPoint).

suggested modification 2:

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The proposed measure does not address behavior (b) at all.

So I propose that the uniform/non-discriminatory licensing covers

ALL sales/licensing of specified products (not just sales to "Covered OEMs").

For example, if a covered OEM can buy 1 million of Windows licenses for

\$5 millions then anyone (including resellers) should be able to buy 1 million licenses for the same price.

This also means that Microsoft should not be able to require a buyer of its software to ship it with a new PC -- software can be sold separately. (this should apply to the end user too)

This modification greatly reduces Microsoft monopolistic pricing power.

An important consequence of these modification (non-discriminatory licensing of specified Microsoft products to all with an explicit permission to resell) is that this would make sections III.A and III.F mostly redundant, as Microsoft will not be able to retaliate against anyone if everyone has non-discriminatory access to all critical Microsoft products.

III.C. Microsoft shall not restrict by agreement any OEM licensee from exercising any of the following options or alternatives:"

The words "any OEM licensee" should be replaced with "any licensee" (including the "end users", see comments to III.A for rationale). The list of activities which any Microsoft licensee should be free to do, should be expanded to include

(1) use any Microsoft product in the manner customer sees fit (e.g. run MsOffice under Wine Emulator on Linux operating system, Microsoft however should not have any obligation to support any non-standard environment)

- (2) resell (with destruction of original copy if applicable) any Microsoft product at any price
- (3) License, use, distribute, promote, develop, sell, support any non-Microsoft products in any lawful manner customer sees fit.

Similar comments apply to sections III.F, III.G and III.H

In general, my suggestion would be to avoid differentiating Microsoft users into many categories (IHV,ISV, OEM, "Covered OEM", "end user") and granting every category specific rights and instead grant uniform rights to all users. This would simplify both the judgment and its enforcement (as there would be fewer conflicts)

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III.E.Starting nine months after the submission of this proposed Final Judgment to the Court, Microsoft shall make available for use by third parties, for the sole purpose of interoperating with a Windows Operating System Product, on reasonable and non-discriminatory terms (consistent with Section III.I), any Communications Protocol that is, on or after the date this Final Judgment is submitted to the Court,

(i) implemented in a Windows Operating System
Product installed on a client computer, and

(ii) used to interoperate natively (i.e., without the addition of software code to the client operating system product) with a Microsoft server operating system product.

While this is a good measure, it is made nearly meaningless by the III.I section and III.J.2 exception. (See below for III.I and III.J.2 comments)

Instead of subjecting disclosure to III.I section, disclosure of protocols information should be subject to "Interoperability Information disclosure" suggestion below.

Furthermore, the waiting period should be eliminated (the disclosure should begin immediately after the Final Judgment is accepted by the court).

Suggested Interoperability information disclosure. (mostly supersedes III.I and III.J.2)

No competition is possible in software unless a would-be competitor has enough information to interoperate with existing software and especially with Microsoft's. Thus conditions on which the interoperability information is disclosed are extremely important.

The proposed final judgment essentially requires
(in section III.I) a would be competitor to negotiate with Microsoft
to gain access to interoperability information. This
--allows Microsoft to greatly complicate a would be competitor's life
--gives Microsoft an ample advance warning of a potential competitor

and section III.F.2 gives Microsoft explicit power to allow/disallow competition in many (potentially, all) cases.

Using the car analogy: to manufacture cars which can compete with and provide a drop-in replacement for Ford cars, one does not have to negotiate/enter into any kind of agreement with Ford. Similarly, software developers developing products competing with Microsoft's ones should not have to negotiate/enter into any kind of agreement with Microsoft, even more so, given Microsoft's history of antitrust law violations.

So I suggest that all the information necessary to interoperate with

(thus allowing development of viable alternatives for) Microsoft products should be as easily and widely accessible as possible.

The only feasible way to ensure wide and easy access to this information would be to publish it on the web with the following conditions: (approximately in the order of importance)

- (1) it definitely should not require *any* kind of agreement
- (in particular, no mandatory registration) between
- the reader/implementor and Microsoft (basically, anyone should be able to read it and implement a competing product it without ever talking to Microsoft)
- (2) access to it should be free.
- (3) Microsoft should also allow
 - (a) mirror the documentation verbatim
 - (clearly separated comments should be allowed)
- (b) translate it into other computer readable formats (e.g. from MSWord to HTML or to pdf) $\ensuremath{\mathsf{MSWord}}$
- (c) translate it into other human languages (and publish the translation)

This disclosure requirement should definitely apply to information mentioned in section III.D (API disclosure) and III.F (network protocol disclosure). It should further apply to File Format disclosure discussed below..

This disclosure requirement does not apply to any information which is not related to interoperability. (for instance if a MSWord utilizes a unique Spell Checker, Microsoft does not have to disclose how the Checker works)

This requirement of free access to disclosed information has some obvious consequences:

- --Microsoft would not be able to enforce any patents if may have on interoperability information (file formats, network protocols, APIs) (it still may hold and enforce patents on specific implementations of those interfaces)
- --if disclosure of interoperability information requires disclosure some 3-rd party information, then Microsoft will have to either drop the product
 - or change it so that 3rd party information is not needed
 - or renegotiate with the 3rd party to allow information disclosure.

The information disclosure procedure suggested above eliminates many potential conflicts between Microsoft and an information request or.

I want to emphasize that having to enter into any kind of negotiation with Microsoft to even start developing a competing product is a major entrance barrier (and this barrier does not exist in most other industries!) and the only way to remove it is to grant a free and easy access to interoperability information as outlined above.

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III.J. No provision of this Final Judgment shall:

- 2. Prevent Microsoft from conditioning any license of any API, Documentation or Communications Protocol related to anti-piracy systems, anti-virus technologies, license enforcement mechanisms, authentication/authorization security, or third party intellectual property protection mechanisms of any Microsoft product to any person or entity on the requirement that the licensee:
 - (a) has no history of software counterfeiting or piracy..
 - (b) has a reasonable business need for the API, Documentation or Communications Protocol for a planned or shipping product,
 - (c) meets reasonable, objective standards established by Microsoft for

certifying the authenticity and viability of its business,

(d) agrees to submit, at its own expense, any

computer program using such APIs, Documentation or Communication Protocols to third-party verification, approved by Microsoft, to test for and ensure verification and compliance with Microsoft specifications

While an obvious intention of this clause is to prevent piracy/security breaches, such a prevention is not in any way related to this antitrust case. For instance, if a Windows Media Player can play certain content, Microsoft should provide enough information to implement a competing player with exactly same functionality.

If the competing player provides some extra functionality, then whether or not such an extra functionality violates some other law (such as DMCA) should be a separate (and independent of Microsoft antitrust case) issue.

Furthermore, "authentication/authorization security" is an extremely broad concept. For instance, Windows file sharing protocol includes some authentification as do many other protocols (including such wide spread ones as ftp and http which are used on the Internet), so these protocols seem to fall under III.J.2. Which makes section III.F (Network protocol disclosure) dependent on meeting III.J.2 requirements.

Then it should be obvious that III.J.2(b,c,d) requirements give Microsoft enough freedom to never disclose anything (or disclose with a significant delay which is almost the same): consider these scenarios

- (1) a startup company will not meet (b) and (c) (business might not seem reasonable or viable)
- (2) R&D department of a large company may want to prototype something without specific plans for a specific product (if the prototype succeeds, then the product will go into planning) this will fail test (b)
 - (3) Microsoft gets a convenient advance warning of any potential competition
 - (4) requirement (d) allows to delay introduction of any competing product.
- (5) open source competition (such as Linux which Microsoft cites as THE threat both in and out of court) would not meet (b) and (c) requirements
- (6) Nearly any software feature can be recast as having something to do with security, anti-piracy, or authentification.

In short, I believe, that section III.J.2 is not needed and in its current form it essentially negates any information disclosure requirements which exist in this judgment. Section III.J.2 should be dropped

Disclosure of file formats.

Microsoft should disclose its file formats: first and foremost for Microsoft Office applications (where Microsoft already has a dominant position) and possibly *all* file formats used by any software sold by Microsoft.

I want to emphasize that file format information is needed for competitors both to MSOffice products AND to Windows Operating System (such as Linux or Solaris) -- no competing Operating system stands a chance on a desktop if there is no application for it which can read already existing documents in MSOffice format (and provider of a competing Operating System can not (and should not!) rely on Microsoft to port MSOffice to a competing operating system).

Disclosure of file formats would significantly reduce artificial barriers for competitor entrance for both office and operating system markets.

I worked as Director of Windows Products Engineering for Borland International (later to be known as Inprise) in 1997 and 1998. During that period, I was responsible for "the Microsoft relationship" and worked with Borland's attorneys on contracts and other matters with Microsoft. I was asked to contribute my thoughts about Microsoft's anti-competitive behavior during this time, and I wrote the following memo in April of 1998. Its primary message is that Microsoft has never been a proponent of innovation, nor a particularly keen innovator. The same can also be said of the other monopoly force in the PC industry, Intel. However, a big difference between the two has been Intel's strict observance of the law and Microsoft's attempts to circumvent the law. While I was at Borland, several times Microsoft proposed that we sign agreements that forced us to recommend and distribute Microsoft's Internet Explorer to our customers - we ALWAYS red-lined these parts of the agreements.

The bottom line is that this probe could have gone further. Prior to Borland, I spent 11 years with Digital Equipment, now a part of Compaq. During that period, I was exposed to Microsoft's tactics in negotiating licensing of their operating system software to PC manufacturers. You've seen testimony of some PC vendors about this. Microsoft has been able to deliver flawed software to these manufacturers while dictating terms that force the manufacturers to assume most of the technical support burden.

The current remedy being proposed does not go far enough, particularly with a company that has made an art of working around the law. I was very disappointed that a structural remedy was not part of the solution, and I hope that the oversight of the proposed remedy is strict and vigilant.

Thank you, Joe Falcone Half Moon Bay, California

A few things that have gone wrong in the PC industry...

PC's have never been high tech.

The operating systems are years behind the times in features, scalability and robustness. As Microsoft tries to prove the enterprise-quality of their software, this has become obvious. No Microsoft software is ready for 7x24 operation. When Microsoft made their big pitch for the Enterprise, they committed themselves to run Microsoft on their own products - Windows NT Server, SQL Server, Back Office, etc. Word on the street is that Microsoft is too big to run themselves on their own products. The obvious solution is to go with the flow and put Oracle's DBMS in - but Oracle won't sell to Microsoft for competitive reasons. So this is one of the reasons why the rumor circulated that Microsoft was going to buy Informix (it still could happen). Although this would allegedly buy Microsoft an enterprise-class database engine, the classic Informix relational database product is old (it's been compared to Oracle 6 - two generations behind Oracle's current product). Microsoft is between a rock and a hard place.

Some number of Microsoft products are not Y2K safe (Year 2000). And any strong mention of this in public is suppressed - an academic who was collecting Y2K software problem reports on a web site was sent a "cease and desist" letter by Microsoft's legal department. Only Microsoft knows what is good for Microsoft.

PC hardware is crude and primitive. I/O buses are slow, difficult to expand, and tricky to design for. For example, some first generation PCI option cards will not work with recent PCI motherboards. This is because the PCI spec was driven largely by Intel to fulfill their agenda. Alternative views are co-opted - Digital's PCI bus committee rep was hired away by Intel early in the program.

The only time Intel had the world's fastest microprocessor was when they had the world's first and only microprocessor. Once other vendors entered the game, the mediocrity of Intel's architectures came to the forefront. The fact is that Intel is a relative newcomer to the computer architecture field. IBM, UNISYS, Digital and others have been designing computers since the 50s. With that experience comes a level of maturity and a portfolio of patents that make it

difficult for others to achieve "best-in-class" performance. Today, nearly every RISC architecture in production (Alpha, HP-PA, PowerPC, MIPS, SPARC), is faster than the fastest Pentium-II. Now that AMD, National Semiconductor, and IDT have foundry agreements with IBM, all of them may get access to the high-speed copper interconnect chip process which IBM innovated and may have a substantial lead in due to its own intellectual property. In other words, within a year or so, Intel may not be making the fastest x86 processor.

Microsoft and Intel have tried to restrict what the PC manufacturers can build thru acquisitions, intellectual property (patents), and their PC 9x initiatives. However, these are principally driven by Microsoft and Intel to fulfill their agenda. The original reason to have these initiatives was to try to guarantee for Microsoft that the manufacturers were sticking to a single spec of base PC functionality for their products, rather than have them go off and implementing new buses, graphics, etc. Of course, the result is an industry with no innovation and no variety. All the products are the same. The original objective was to enforce PC 9x compliance by withholding logo branding (Intel Inside or Designed for Windows xx) if the product did not meet PC 9x. It's not clear to what degree they've been able to do that.

The latest incarnation of the initiative is PC 99. Adaptec is a participant in PC 99. Aparently Microsoft in one of their playing god moods decided to remove SCSI hard disks as a supported technology in PC 99. The idea was to replace it with IEEE 1394. The Adaptec folks had to point out that there are virtually no disk drive products available using 1394 as an interface.

Earlier versions of PC 9x made no mention of mobile systems. Even the current mobile systems spec of PC 99 is considered grossly inadequate to the point that a consortium of notebook manufacturers (as reported recently) is banding together to form their own standards group.

Now Intel is using their intellectual property (primarily patents on the Pentium-II interface bus) to restrict who can build chipsets for PCs. Right now, you can really only buy Pentium-II chipsets from Intel. Intel has threatened to sue other companies who enter this field. Traditionally, the pinout of a non-military-classified chip sold on the open market has been a public spec. If you think about it, where would the computer industry be today if you could BUY a chip on the open market, but you couldn't INTERFACE it to anything without a LICENSE from the chip manufacturer. This, in fact, was the problem with the IBM MicroChannel bus. You could build MicroChannel option cards, but you needed to register them with IBM and get an ID for your card (for autoconfiguration) before you sold it. MicroChannel failed as a result, even though it had PCI-class technology years ago (the PCI connector is in fact a MicroChannel-style connector).

Intel's argument is that they are no longer selling "chips" as such, but computer system modules for a patented, proprietary bus (Slot 1 et al). For this there is precedent of course. All of the big computer manufacturers used proprietary buses, for which you generally had to get licenses to build peripherals for. The problem is the tradition and vitality of the PC industry was built around technology that was not under intellectual property restrictions. Now you can only buy chipsets from Intel. The chipsets effectively determine the basic features of the PC, including power management in the case of notebooks. As noted earlier, the notebook manufacturers are already blanching at the thought of having their features, such as power management, determined solely by what Intel's Pentium-II mobile chipsets deliver.

As Intel's standards (Slot 1, PCI, AGP, I2O) become established, it becomes easy for Intel to dominate each segment, either solely or collusively with another vendor, such as the case with the intelligent I2O I/O bus and Wind River Systems. When you purchase the i960 RP processor (the heart of the I2O spec), you get the IxWorks I2O-compatible Real Time Operating System by Wind River Systems (License included with processor). This event sent shockwaves thru the Real-Time Operating System industry as it would guarantee a stream of revenue for Wind River once I2O-enabled systems began shipping in volume.

As Microsoft's initiatives have spread into other areas, such as palmtop

computing, we see the same control. In the Windows CE area, the hardware specification is controlled by Microsoft. Manufacturers build to the Microsoft spec and Microsoft delivers executable code to the manufacturers. No source is available and Microsoft develops all the drivers. Is it any wonder that all CE products look the same? The only concession that Microsoft has granted has been the support of different microprocessors, insisted upon by the aggressively competitive Japanese contenders in the high-MIPS-per-milliwatt category. Everyone in the CE space is losing money, everyone except for Microsoft who is apparently charging more for CE than for Windows 95, basing this on the fact that they've architected the entire product, etc, etc. In fact, what Microsoft has done is architect the innovation OUT of the product by controlling it too strictly and not allowing their partners to innovate.

Their goal is to be the mobile communication and computing platform of choice when we get to the point of convergence between palmtops, notebooks, wireless networks, and cell phones - a sort of Pilot on steroids. The most interesting competition going on right now is that between CE and the Pilot, especially now that IBM is backing and reselling the Pilot. Unlike the past, it is clear that anti-competitive actions by Microsoft in that market will not go unnoticed.

All of this information is publicly verifiable by hitting the right web sites with the right search keywords. Even the rumors have been reported in one place or another. Just haven't seen anyone put the whole picture together. Enjoy!